

ABSTRACT OF THE DISCLOSURE

A process for forming thermoplastic composites that uses wet use chopped strand glass is provided. Wet reinforcement fibers such as wet chopped strand glass fibers are opened by passing the fibers consecutively through a first opener, a condenser, and, optionally, a second opener. The opened reinforcement fibers are mixed with a resin and transferred to a first sheet former. The resin is preferably polypropylene fibers. An optional second sheet former may be used to form a final composite having high structural integrity. The resulting sheet may be optionally passed through a needle felting machine for mechanical strengthening. The sheet is then passed through a thermal bonder to thermally bond the reinforcement glass fibers and resin. The composite product that exits the thermal bonder can be subsequently used as a reinforcement in a molding process to produce composite articles.